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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,597	06/01/2001	James M. Reuter	P01-3666	2619

25235 7590 04/17/2003

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EXAMINER

ROBERTSON, DAVID L

ART UNIT	PAPER NUMBER
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2186

DATE MAILED: 04/17/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

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DATE MAILED:

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 1-20 is/are pending in the application.
Of the above, claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-20 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☒ The drawing(s) filed on 06/01/01 is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☒ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☐ Notice of Reference Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 4
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

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The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The drawings are objected to for the reasons noted below. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

- In figure 2, the reference characters and lead lines (arrows) do not appear to correctly line up with the elements of the mapping table to which they should apparently point to (e.g., see page 8, lines 19-28).
- Reference characters mentioned in the description must appear in the drawings (37 C.F.R. § 1.84(p)(5)); however the drawings do not show reference character 280 (see page 13, lines 5-6).
- The same part of an invention appearing in more than one view of the drawing must always be designated by the same reference character, and the same reference character must never be used to designate different parts (37 C.F.R. § 1.84(p)(4)); the following references conflict: —the storage locations 230— (page 7, line8-9), —the faulting segment 230— (page 17, line 22) and —the newly allocated storage location 230— (page 17, lines 25-26).

The disclosure is objected to because of the following informalities:

- Page 5, lines 25-26, that the “mapping agents 110 that may reside on a host 140 are elsewhere on the Network” is not understood and appears to be contradictory.
- Page 5, lines 27-28, the meaning of “to fabricate the existence of the virtual disk drive” is not understood.

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- Page 7, line 24, “mapping table entries 220” should be —mapping table entries 210— (see line 18) or —virtual drive segments 220— (see line 5).
- Page 8, lines 5-6, the meaning of “different access to the same storage device” is not understood.
- Page 10, line 7, the “do_write” command has not been adequately described.
- Page 10, lines 24-26, the sentence beginning “When active,...” does not make sense, particularly the portion following “an”.
- Page 15, line 18, the “quiesce function” has not been adequately described.
- Page 15, line 19, the “activate command” has not been adequately described.
- Page 15, line 21, the “disk copy operation 300 concludes” with no “copy” having been made, please explain.
- Page 17, line 7-page 18, line 28, the description of the “reverse-delta process 500” is inscrutable, it defies comprehension as written. A sample of confusing portions are noted below.
- Page 18, lines 1-3 differs significantly from the descriptive material found in figure 5A, step 560.
- Page 18, lines 1-2, “all mapping agents 110 that have write faults” lack adequate description.
- Page 18, lines 2 and 5-6, the relationship between the “write faults” and the “outstanding read I/Os” is not clear.
- Page 18, lines 1-2 and 12, the relationship between “all mapping agents 110 that have write faults” (i.e., plural) and “the faulting map agent 110” (i.e., singular) is not seen.

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Appropriate correction is required.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-11 and 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites a method of "copying the contents", however, nowhere within claims 1-7 does any copying take place, thus the claim is incomplete, lacking essential elements, see MPEP § 2172.01. Claim 17 recites the step of "completing operations at the table", however there is no corresponding term or phrase in the remainder of the specification so that the meaning of the noted step may be ascertainable by reference to the description as required by 37 C.F.R. § 1.75(d)(1). Additionally, it is not clear what applicants mean by "obtaining mapping information" in claim 19 in the method of "maintaining a table for mapping". Claim 20 recites "specifying a block on the virtual disk within the operation" but has not set forth any particular "operation." Further, the relationship between "maintaining a table" and "copying data" appear to be inconsistent. Additionally, claim 20 is directed to a computer program for "maintaining a table", however none of the claimed steps modify or in any other

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sense service said table thus this claim also lacks essential elements. Finally, it is not clear what is meant by “corresponding mapping agents.” Due to the ambiguities and confusion in claims 1-11 and 17-20, no art has been applied thereto, see *In re Steele*, 49 CCPA 1295, 305 F.2d 859, 134 USPQ 292 (1962) and *In re Wilson*, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). The examiner will not speculate as to the intended meaning.

Claims 1-16 and 20 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention; or alternatively, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 1-7 and 20 have been discussed above as missing an essential step. Claims 8, 10 and 12 recite the step of “creating a new segment,” however applicants have explicitly stated that “It should be appreciated that the particular mechanism and infrastructure to select and allocate free segments is beyond the scope of this disclosure.” Surely it will also be appreciated that if it is not described, it cannot be claimed. Note also that the constitution of the mapping agents has not been described, therefore claim 16 also has no support.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

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or faxed to:

(703) 746-7239, (for formal communications to Technology Center 2100 intended for entry)

Or:

(703) 746-7240 (for informal or draft communications to Technology Center 2100, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

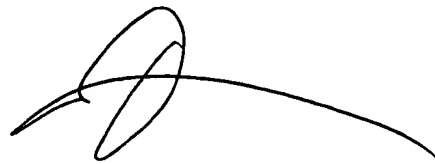
Any inquiry of a general nature or relating to the status of this application should be directed to the technology center receptionist whose telephone number is **(703) 305-3900**.

Direct any inquiries concerning drawing review to the Drawing Review Branch (703) 305-8404.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Robertson whose telephone number is (703) 305-3825.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim, can be reached at 305-3821. **The fax number for Technology Center 2100 for Official communications is (703) 746-7239.**

Communications which are not application specific may also be posted on e-mail at *David.Robertson@USPTO.gov*.



DAVID L. ROBERTSON
PRIMARY EXAMINER
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